

WHAT IS CLAIMED IS:

1. A coupling structure for a tandem motor, comprising:

two bearing sleeves each formed with at least one groove;

5 a connector having a first end and an opposed second end, the first end and the second end each formed with at least one groove;

a first elastic fastener fit into the groove of the connector at the first end and received in the groove formed on one of the two bearing sleeve; and

a second elastic fastener fit into the groove of the connector at the second end and received in the groove formed on the other bearing sleeve.

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2. The coupling structure according to claim 1, wherein the grooves formed on the bearing sleeves and the connector are ring-shaped.

15 3. The coupling structure according to claim 1, wherein the first and the second elastic fasteners are ring-shaped.

4. The coupling structure according to claim 1, wherein the first and the second elastic fasteners are C-shaped retaining rings.

20 5. The coupling structure according to claim 1, wherein the material of the bearing sleeves is selected from the group consisting of metal and engineering plastic.

25 6. The coupling structure according to claim 1, wherein the bearing sleeves are copper sleeves.

7. The coupling structure according to claim 1, wherein the connector is formed with a leading edge to create an guiding surface between the grooves.

5 8. The coupling structure according to claim 7, wherein the guiding surface is an inclined surface.

9. A coupling structure for a tandem motor, comprising:

two bearing sleeves each formed with at least one groove on its inner surface;

10 a connector having a first end and an opposed second end, the first end and the second end each formed with at least one groove; and

at least two ring-shaped elastic fasteners, each of which has an inner edge fit into the groove formed on the connector and an outer edge received in the groove formed on the bearing sleeves.

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10. The coupling structure according to claim 9, wherein the grooves formed on the bearing sleeves and the connector are ring-shaped.

20 11. The coupling structure according to claim 9, wherein the material of the bearing sleeves is selected from the group consisting of metal and engineering plastic.

12. The coupling structure according to claim 9, wherein the connector is formed with a leading edge to create an guiding surface between the grooves.

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13. The coupling structure according to claim 12, wherein the guiding surface is an inclined surface.

14. A coupling structure for a tandem motor, comprising:

5 a first bearing sleeve having one end formed with a connection part, the connection part being formed with at least one groove in its outer surface;

 a second bearing sleeve formed with at least one groove on its inner surface ;
and

 at least one ring-shaped elastic fastener having an inner edge fit into the
10 groove formed on the connection part of the first bearing sleeve and an outer edge received in the groove formed on the second bearing sleeve.

15 15. The coupling structure according to claim 14, wherein the connection part is formed with a leading edge to create an inclined guiding surface.

 16. The coupling structure according to claim 14, wherein the grooves formed on the bearing sleeves and the connection part are ring-shaped.

20 17. The coupling structure according to claim 14, wherein the ring-shaped elastic fastener is a C-shaped retaining ring.

 18. The coupling structure according to claim 14, wherein the first and second bearing sleeve are made of metal.

25 19. The coupling structure according to claim 18, wherein the first and second bearing sleeve are copper sleeves.

20. The coupling structure according to claim 14, wherein the first and second bearing sleeve are made of engineering plastics.